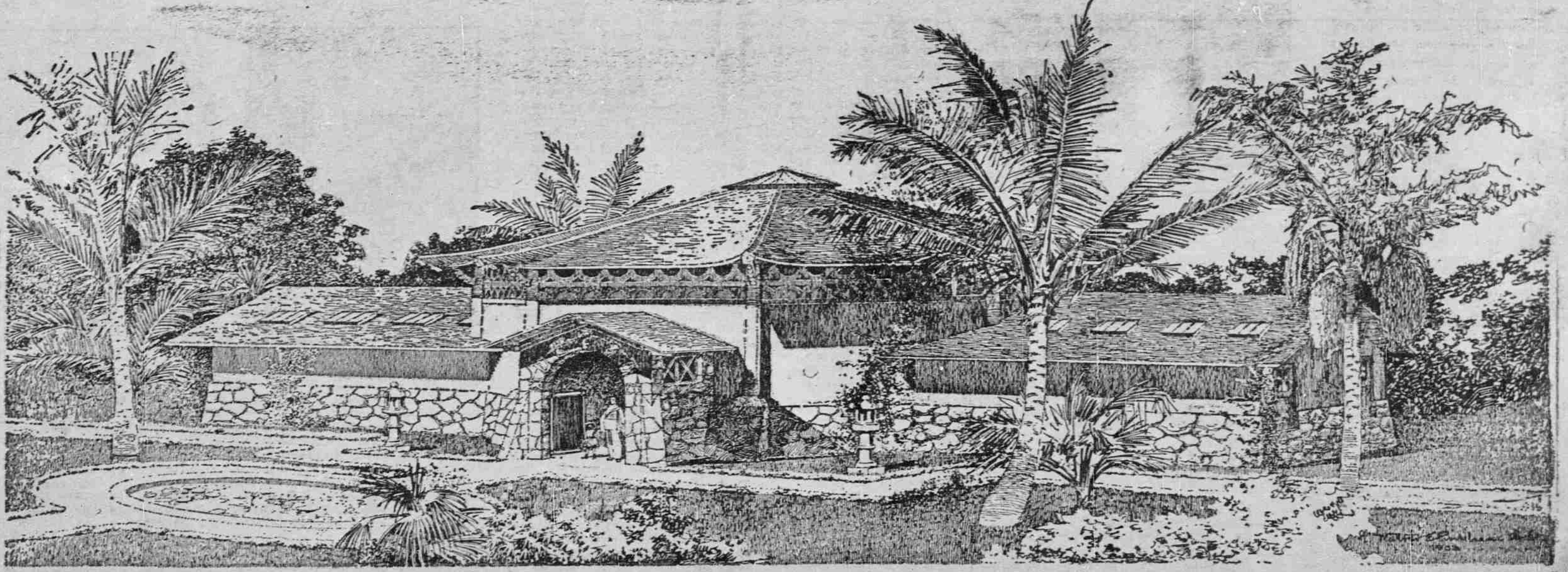


The Aquarium at Kapiolani Park



Under the coconut trees at Waikiki there is growing up an institution that bids fair to carry the fame of Honolulu as far as any of the many distinctive island institutions have carried that fame in the past. And it has been carried far. One of the sights of Honolulu, indeed, has always been the fish market—not for the strange mixture of races that gather and chatter there, although that is a great sight for the outsider, but for the still more strange fishes that may be seen lying upon the marble slabs of the market stalls. The fishes of the tropics, rarely seen save when they have lost their first brilliancy of coloring through death, make one of the sights of the tropics.

Under the coconut trees at Waikiki it is now given to the stranger as to the citizen to see the fishes of the tropics in their native element, resplendent in all the glories of the paintings of nature. That is what the Aquarium established by the Rapid Transit Company on the line of its Kapiolani park extension has done for the city. It is a work that will not stop, for the Aquarium is a thing that once started, must continue to develop. Already there are shown in the tanks more than one hundred varieties of tropical fishes, and the number is being added to constantly. In fact, the Aquarium forms a continuous source of study and amusement to those interested in things marine, for the fishes change constantly. And while there are certain varieties that are there at all times new varieties are constantly added. And, seen in the water in tanks wherein the light is so managed as to reach all parts, the intimate life of the marine forms may be studied to the best possible advantage.

For a number of years past efforts have been made by certain public spirited citizens of Honolulu to establish an aquarium. Their efforts met with strong discouragement, but this was at last overcome. In the first place, it was desired to have a site near the beach and near the park. The aquarium would be dependent upon the sea for the life of the fishes, and dependent largely upon the crowds going to the park for its patronage. At last, through the liberality of a number of public spirited citizens it became apparent that the aquarium could be built, and an architect was at once set to work on plans for the present building. The Aquarium, as it stands today, was opened to the public on March 19, 1904, a number of invited guests being present at the opening. Speeches were made by Professor W. T. Brigham, Mr. Peck and United States District Judge Sanford B. Dole. Upon that occasion Mr. L. A. Thurston, being asked by L. T. Peck, president of the Rapid Transit, gave a brief account of how success had at last come to crown the effort to establish the Aquarium.

The Aquarium, said Mr. Thurston, was the result of the combined efforts of several people. The site had been donated by Mr. James Castle. Originally it was a portion of Kapiolani park leases, and was acquired by Mr. Castle, and for several years the company had been trying to acquire it. The Rapid Transit Company realized that quite a large amount of money was needed to build and stock the Aquarium, and until Mr. C. M. Cooke and his wife had

come forward with their generous offer the project was far from realization. Mr. and Mrs. Cooke had agreed to construct the building on condition that Mr. Castle give the land and that the Rapid Transit Company agree to stock and keep the Aquarium running. The plans, by Mr. Pinkham, were approved, and the building was constructed at a cost of \$8000. Mr. Castle gave the land, valued at \$7500, and the Rapid Transit Company spent \$3233 in preparing the exhibit and \$385 additional in stocking it. Mr. Thurston stated that bad weather during the past month had made it impossible for the fishermen to get specimens at sea or on the reef. There are now sixty varieties in the Aquarium and there are between four and five hundred specimens to be found in these waters. In a few weeks a larger representation of the fish of these waters will be secured. Some deep sea fish cannot be placed in the Aquarium, said Mr. Thurston, because they live at great depths, under pressure, and in addition are accustomed to more freedom than can be given them in limited confines.

Mr. Thurston explained further that the lease of the ground upon which the building stood was for seventeen years, and during that period the Rapid Transit would pay the running expenses of the Aquarium; at the conclusion of which term the fee of the land would revert to the Government. He hoped that the land would then be turned over to Kapiolani park, and that the Aquarium might then become a public institution. Four adjoining lots, upon which the lease expired at the same time, he hoped also might be given to the park, so that a sea frontage would be obtained for it.

The Aquarium building, as it stands today, is in the shape of a cross, its arms being 83 feet 10 inches, and its total length on the main axis, from the entrance to the end of the building, 165 feet. At the intersection of the arms an octagonal pavilion is formed, forty feet wide, in the center of which is an open tank, now filled with goldfish, mullet, carp and a turtle or two. The material used for the construction of the building is lichen covered flat stones for a sub-base with a buttressed stone entrance and cut voussoir arches. Above the sub-base the building is of frame. The building, as it is planned, admits of extension in the future, and standing as it does upon a lot that is open to the sea, affords the only public entrance to the beach at Waikiki.

The aquaria, in which the principal part of the fishes are kept, lead off from the central pavilion, and there are thirty-six of these all told. The tanks are constructed of concrete and metal lath, 3 feet 6 inches wide, 3 feet 6 inches high and 5 feet long; on the corridor side, separating the visitor from the finny tribe, are plates of half an inch thick polished plate glass. The tanks are lighted from skylights formed in the roof above, the light penetrating through the water and showing off the beautiful tints and variegated colors of the fish in their element.

Back of the row of tanks a passage affords working space and conceals from view the attendants at their duties, caring for the fish, regulating the supply of air or water, or rearranging new exhibits. Salt water is pumped from a well excavated in the coral near the beach into a 4000 gallon distributing tank, elevated sixteen feet. The water thus obtained is subjected to a filtering process, deleterious matter being separated by the passage of water through sand and coral.

From the distributing tank water is conducted through one and a half inch bored redwood pipe, with brass cock outlets for the supply of each of the aquaria, into which runs constantly a half inch jet of water, delivered at the surface through a nozzle or reducer, which admits air being sucked in and forced into the water of the tank in minute globules. There is a separate piping system through which an auxiliary pump forces air into the various tanks, thus insuring water being perfectly aerated. In addition to the main building a strong concrete tank has been built on the sea front of the property, and in this tank it is the aim of the Aquarium management to keep a large shark on exhibition at all times. As the larger varieties of shark do not do at all well in captivity this is a constant source of expense, but it is one that is borne cheerfully by the management because of the added value of the exhibit by the presence of the monsters of the deep.

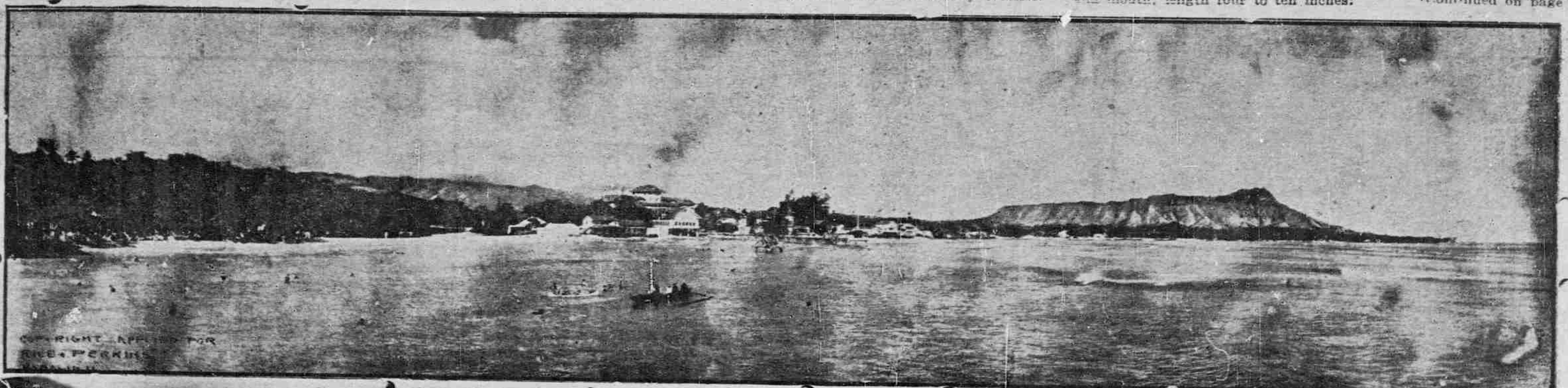
Below is a partial list of the fishes which have been exhibited at the aquarium with a short description of each. The Hawaiian names only are given except in the few cases where there are English names for the same fish. The scientific classification is omitted. **Alaiki** or squirrel-fish. Red and white longitudinal stripes; three to five inches in length; large eyes. **Alaiki lakea**. Red, brown and white stripes; pointed head and length about three inches; similar to alaiki. **Aholehole**. Flat, silver colored fish, four to six inches. **Aweoweo**. Red, mottled with white; four to eight inches. Large schools of these fish are frequently seen in the harbor. **Awa**. White belly, brown and yellow stripes on back; black spot at base of dorsal fin. **Ahululu**. Pink and white; four to eight inches. **Awa** or milk-fish. Slender, white fish six to fourteen inches in length; found in both salt and fresh water; one of the most common table fish here, the market sales in 1900 ranking fourth. **Akule** or goggler. White belly, bluish back and very large eyes; average length about eight inches, market sales in 1900 were third, the number sold being 224,033. **Akikole**. Slender, brownish fish with long red bill; length about six inches. **Amaama** or mullet. Slender white fish with gray back; has coarse scales and flat head; principal food fish of Honolulu; market sales for 1900 were 1,001,571 or four times the number of any other variety. **Awa** aua. Long, slim white fish, very similar to the awa but more slender. **Catfish**. Reddish brown fresh water fish with broad, flat head. **Carp**. Coarse scaled, gray; fresh water. **China-fish**. Dark brown, mottled with black; imported from China and found in many fresh water streams as well as in rice and taro patches; often attain a weight of fifteen pounds.

Goldfish. Fresh water fish of brilliant red color; six to twelve inches in length. **Hilu**. White body with back of yellow, brown and black stripes; size four to fourteen inches. **Humuhumu** or trigger-fish. Flat, brown fish with pointed head and with eyes set well back from mouth; six to twelve inches. **Humuhumu nukunuku apuaa** (trigger-fish). White belly, reddish brown back; has broad black band running through eyes diagonally across body; two V-shaped bands of yellow next to tail; average length about eight inches. A very handsome fish. **Humuhumu nukunuku lei**. Brownish fish with yellow band on head just back of eyes which gives it the name "lei". **Humuhumu elele**. Black trigger-fish with turquoise blue stripes along base of fins; length about eight inches. **Humuhumu nukunuku hia keokeo**. Black or reddish brown with white fins edged with black (the ladies ask for the fish with the chiffon fins); pink tail with white band around base; six to ten inches. **Humuhumu**. Dark brown trigger-fish with black band back of eyes. **Hinalea**. Slender fish about three to six inches in length; color a dark brown with dark blue head and wide orange band back of eyes. **Hinalea luahine**. Reddish brown; scales tipped with lighter brown; white tail bordered with black. **Hinalea lolo**. Brown fish with turquoise blue markings on head and body. **Hinalea lili**. Peacock blue-fish with pointed beak; length about eight inches. **Hilu lauli**. Turquoise blue; length twelve inches. **Hilu kea**. Brown body; green markings on head; about half the body next to tail is covered with bright purple spots; tail a brilliant orange; length six to twelve inches. **Halohalo** (parrot-fish). Turquoise blue and white, fourteen inches long and weighing about four pounds. **Hee** or squid. Has oval shaped pouch in which are located the digestive organs; prominent head and large eyes, eight tentacles on the under side of which are two rows of discs or suckers; these are used for clinging to the rocks and in catching their food. The largest one exhibited at the aquarium had a spread of six feet. **Kupipi**. Flat fish, gray in color with large black spot at base of tail; about six inches long. **Kupoupon**. Slender, with round body; white belly, brown back flecked with red and yellow; eight to fourteen inches long. **Kumu** or goat-fish. Bright pink with deeper tinge along back; weight from one to four pounds. **Kihikihl naapio** or Moorish idol. Flat fish about the size of the palm of the hand; marked with alternate bands of black and yellow; has sharp and powerful beak; dorsal fin tapers gradually into a long, graceful white plume. Much admired by tourists.

Keke. Slender brown fish about three inches in length. **Kala**. Flat body of a bluish gray tinge; sharply forked tail both extremes of which taper gracefully into small streamers about two inches in length; eight to sixteen inches in length. This fish is noted chiefly for the horn which projects about one and a half inches from the head. **Kalaholo**. Similar to kala but with darker color and shorter horn. **Kole**. Small flat fish of dark brown color; yellow eyes. **Kaku** or barracuda. Slender white fish with dark back and large mouth; six to fourteen inches. **Kaaha**. Flat fish; light brown in color with white band around head. **Kawakawa** or bonito. Oval shape, coming to point at head and tail; bluish tinge mixed with gray; weighs six to ten pounds. **Lauvilili**. Small and flat; bright yellow, thickly covered with small black spots. **Laenihl**. Gray and white with dark blue markings; horn on top of head which stands up when fish is angry or frightened; six to ten inches. **Lauvilili nukukoli**. Slender fish of brilliant canary yellow; length about ten inches. **Lehua**. Red and white; red bands are same shade as the lehua blossom from which it is supposed to derive its name. **Lapakihi**. Rather a flat shape with broadest part of body just back of head, giving the appearance of having a hump on the back; marked with alternate bands of gray and black running diagonally across body; length about twelve inches. A very odd fish. **Lai** or mackerel. Slender silver fish about a foot in length; skin has a brilliant gloss which shines like satin. **Lauhau** or butterfly-fish. There are about ten varieties of the lauhau five of which have been on exhibition at the aquarium. The prevailing color of all is yellow, but the trimmings of the different species are of a great variety of colorings; shape is flat and they are all of small size. **Manini** or Surgeon-fish. Flat in shape with length of about six inches; body a dark gray, crossed with narrow bands of dark brown. **Mana loa**. Gray body with darker back and mottled with white. **Maomao**. Four to eight inches long and flat; dark blue with black bands running around body. **Moano** or goat-fish. Slender body marked with red, black and white patches; six to ten inches. **Maili**. Reddish brown flat fish, two to six inches in length. **Moi**. Silver color with darker back; mouth set back from end of nose; six to twelve inches. **Malolo** or flying fish. White body with rich blue back; length from six to fourteen inches; has wings with a spread equal to about the length of the body; caught almost entirely by Hawaiian fishermen. **Mano** or shark. White belly and gray back; length thirteen feet. **Naimai**. Brown body with bar of orange just back of gills; six to twelve inches in length and flat. **Nunu**. Bluish gray color; body long and slender with head about one-fourth the length of body; very small mouth; one to three feet. **Nohu**. Dull brown color; large head and mouth; length four to ten inches; when lying still has much the appearance of a piece of rock.

Nenuue. Flat fish with very small mouth, bluish gray in color; length ten to sixteen inches; width about half the length; weighs from two to six pounds. **Oopu**. Small brown fresh water fish. **Ohi** or file-fish. Yellow and brown, covered with black spots; has horn on back with rough edge like a file; two to four inches long. **Opole**. Red covered with white spots, orange tail tipped with red; four to ten inches in length. **Opule lauli**. Turquoise blue, mottled with dark blue; tail yellow tipped with blue; six to twelve inches. **Opule hue** or balloon-fish. Brown covered with white markings; poisonous except when carefully dressed; six to eighteen inches long; when angry it blows up like a toy balloon. **Opule kala** or porcupine-fish. Gray, covered with black spots; large head and mouth with eyes about the size of a cow's; body covered with long spines; blows up like the opule hue and when blown up the spines stand out like a porcupine's quills, making an excellent protection; feeds on shellfish. **Opule pahu** or box-fish. Rectangular shaped body, very hard; small head and mouth; brown in color and covered with white spots. **Opule moa**. Same shape as opule pahu, has dark blue sides and yellow marks on head and tail. **Oili** lope. Flat, brown fish with black tail; two to four inches. **Opelu** or mackerel scad. Slender body of white, with bluish back; six to twelve inches in length. **Olani**. Light green body with horizontal bands of reddish brown, and cross stripes of same color; four to six inches. **Omaka**. Brown, tinged with orange; large mouth; six to twelve inches. **Opule kai**. Gray, covered with red spots; large head and mouth; prominent eyes; always found lying close to rocks. **Palani**. Brown and flat; has blue line along base of fins and a blue tail; six to twelve inches. **Pualu**. Similar to palani, but without the bright coloring. **Panuhunuhu**. Coarse scales; brown with gray spots; six to eighteen inches long. **Pakii** or sand-fish. Sometimes called flat-fish. Belongs to the flounder family; body flat with fins running around edge; eyes are raised above body to such an extent that when buried in the sand the eyes are still exposed. Visitors often overlook this fish on account of its resemblance to the sand. **Pala**. Brown flat fish about three inches long. **Poke**. Black with white spot on side; about three inches long. **Pinao kai**. Gray, mottled with black and orange spots; has wings similar to the malolo; six to twelve inches long. **Pakupaku**. Flat in shape; black body with large orange spot next to tail; fins are black, orange and white; tail is orange, tipped with white; six to ten inches long.

Pakupaku (young ones). White body tinged with blue along back; fins are either yellow or blue; six to twelve inches. **Pakupaku**. Flat in shape; black body with large orange spot next to tail; fins are black, orange and white; tail is orange, tipped with white; six to ten inches long. (Continued on page 13.)



DIAMOND HEAD AND WAIKIKI BEACH.